

In the Claims

1 (original). A peptide comprising an Acetyl CoA carboxylase (ACCase) having a deleted biotin binding domain, having a deleted carboxy transferase domain, and having a functional biotin carboxylase domain.

2 (original). The peptide according to claim 1, wherein said ACCase is selected from the group consisting of mammal, insect, yeast, Ascomycota, Basidiomycota, and Oomycota ACCase.

3 (original). The peptide according to claim 1, wherein said carboxylase is *Ustilago maydis* carboxylase.

4 (original). The peptide according to claim 1, wherein said carboxylase is *Phytophthora infestans* carboxylase.

5 (original). The peptide according to claim 1, wherein said carboxylase is *Magnaporthe grisea* carboxylase.

6 (original). The peptide according to claim 1, wherein said carboxylase is *Saccharomyces cerevisiae* carboxylase.

7 (original). The peptide according to claim 1, wherein said carboxylase is human carboxylase.

8 (original). The peptide according to claim 1 having the amino acid sequence given in **SEQ ID NO: 2**.

9 (original). The peptide according to claim 1 selected from the group consisting of peptides having an amino acid sequence as given in **SEQ ID NO: 4, SEQ ID NO:6, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, SEQ ID NO: 16, and SEQ ID NO: 17** through **SEQ ID NO: 71**.

10 (original). The peptide according to claim 1, wherein said peptide is a monomer.

11 (original). The peptide according to claim 1, wherein said peptide binds to soraphen.

12 (original). The peptide according to claim 1, wherein said peptide binds to soraphen and has a soraphen dissociation constant of from 10^{-7} to 10^{-14} M.

13 (original). A composition comprising:

(a) an aqueous carrier solution; and

(b) the peptide of claim 1 solubilized in said aqueous carrier solution; with

said peptide included in said composition in an amount of from 0.001 nanograms to 20 milligrams per milliliter of aqueous carrier solution;

said peptide having a soraphen dissociation constant in said composition of from 10^{-7} to 10^{-14} M; and

said composition having a pH of from 5 through 9.

14 –15 (cancelled).

16 (withdrawn). A method of identifying Acetyl CoA carboxylase inhibitors or activators, comprising:

a) combining a peptide according to claim 1 and a compound to be tested for the ability to bind to said biotin carboxylase domain, under conditions that permit binding to said biotin carboxylase domain;

b) determining whether or not said compound binds to said biotin carboxylase domain, the presence of binding indicating said compound is or may be an Acetyl CoA carboxylase inhibitor or activator.

17 (withdrawn). The method of claim 16, further comprising the steps of:

c) employing a compound identified as binding in step (b) in an assay to detect inhibition or enhancement of Acetyl CoA carboxylase activity; and

d) selecting a compound identified in step (c) that inhibits or activates Acetyl CoA carboxylase activity.

18 (withdrawn). A method of identifying fungicides, comprising:

a) combining a peptide according to claim 1 and a compound to be tested for the ability to bind to said biotin carboxylase domain, under conditions that permit binding to said biotin carboxylase domain;

b) determining whether or not said compound binds to said biotin carboxylase domain, the presence of binding indicating said compound is or may be a fungicide;

c) employing a compound identified as binding in step (b) in an assay to detect inhibition of Acetyl CoA carboxylase activity; and

d) selecting a compound identified in step (c) that inhibits Acetyl CoA carboxylase activity.

19 (withdrawn). A kit comprising:

(a) a first peptide of claim 1; in combination with

(b) a second peptide of claim 1,

wherein said first and second peptides are from different species.

20 (withdrawn). A kit of claim 19, wherein said first peptide is a non-mammalian peptide and said second peptide is a mammalian peptide.

21 (withdrawn). A kit comprising:

(a) a first peptide of claim 1; in combination with

(b) a second peptide comprising an ACCase having a deleted biotin binding domain, having a deleted carboxy transferase domain, and having a non-functional biotin-carboxylase domain;

wherein said first and second peptide are from the same species.

22 (withdrawn). A kit of claim 19, wherein said first and second peptide are both *S. cerevisiae* peptides.